GM-1910

271 3 10.

SL-10 1-18.

" Invention of Charles Washington Kerrell of Berkely for an Invention for improvement in Process for treating a semi solid material in the containers of filter presses and for removing the same therefrom "

G. R. S. 59]

GENERAL AND REVENUE SECRETARIAT.

1910-11.

(Genl Misc.)

File No. 271-10

Serial Nos. 1-18 ✓

Papers Filed.

Month April 1913

SUBJECT.

Invention of Charles Washington Merrell of Berkeley for an Invention for improvement in processes for treating a semi-solid material in the Containers of filter presses & for removing the same therefrom.

PREVIOUS REFERENCES.

LATER REFERENCES.

G. Mc. 527-1781-2+3

Gen. 176-87 (153)

KRL/4/7/13

K.N. Krishnaswami & Co

G.R.S. 11] 1910-11

GENERAL [redacted] REVENUE SECRETARIAT.

(Genl. misc)

NOTES.

Reg^r no 7 of 1910-11

File No. 2 | 1

FILE HEADING.

Invention of Charles Washington Merrell of Berkeley for "An improvement in processes for treating a semi-solid material in the containers of filter presses & for removing the same therefrom"

From

Messrs: Remfry & Sun. Calcutta.

No. A. Dated 24.4.11 Received 27.4.11

Diary No. 458 | Enclos. | Spare Copies | Serial No. 1

BRIEF ABSTRACT OF LETTER.

Forwards an application for the grant of leave to file a specification of the above invention, together with a Power of Attorney & a Sum of Rs 11 & states that no corresponding Indian Application has been made

NOTES AND ORDERS.

Send. with 3085.

Recd. 27-4-11

Vs (12) 1.5.11

Vs. 41

Appd. 1.5.11

NOTES—First sheet

GPB—30,000 – 3-4-07.

G. R. S. 12]
General and Revenue Secretariat.

Gen. File No. 271 of 1910

5296 of 11.

Serial No.	
2	To the DC, Ty Dept, Bangalore. No C 6457 Dt 6.5.11. Forwards the sum of Rs 10/- being the applr fee recd with the above & requests acknowledgment.
3	To the Supdt of Stamps. No C 6458 Dt 6.5.11. Forwards the Power-of-Attorney + Re 1 recd with Sl 1 and requests that the former may be stamped with the a general stamp of the value of Re 1/- & returned
4	To the State Geologist. No C 6459 Dt 6.5.11. Forwards for report the applr recd with Sl 1 — Sl. 5 of G.m 271 of 1910-11 acknowledgs. the receipt of Rs 10 sent with Sl 2. Sl. 6 of G.m 271 of 1910-11 ~~acknowledgs~~ forwards the Power of Attorney sent with Sl 3 duly stamped.
5	From the State Geologist No 2436 Dt 6.6.1911. Forwards copy of the Chief Inspectrs report recommending the grant of the leave asked for (Ref refers to the remarks on the applr in file no G.m. 270 of 1910-11.
#6	From Messrs Remfry & Son. No Dt 5.6.12. Forward amended claims in respect of the inventn (Please refer to the Dept's note on a similar ref in G.m. File No 270 of 1910-11). To the State Geologist. No 6573 Dt 4.6.12. G.m 270-10-11 With refce to Sl 8 (Sl 5 above) forwards amended claims in respect of the two inventions recd with Sl 10 (Sl 6 above)

action taken in G.m. 270 of 1910-11
15
10.6.11

NOTE—Contn. sheet.

GPB—55,000—27-4-09

G. R. S. 12]
General and Revenue Secretariat.

Gen File No. 271 of 1910

Serial No.

and requests to be informed if the said claims may be accepted and also forwards pr reply and returns the applications in respect of the said invention.

7 From the State Geologist No. 233 d/23.7.12.

With reference to the above, reports that the amended claims may be accepted and the leave applied for for filing the specification granted.

~~Necessary~~ Draft is put up.

Subd 29.7.12 VS. 29.7.12

Issue

8 To Mr Charles Washington Merrill, No. C. 658 d/3.8.12 — Authorizes him to file a specification of his invention referred to above.

9 To Messrs Remfry & Son, Calcutta, No. C. 659 d/3.8.12 — With reference to ll 6, forwards Copy of the above Order for Communication to the party concerned as regards his other invention, states that the amended Claims will be accepted provided certain amendments mentioned herein are made.

(G. M. 270-10).

10 From the above letter d/ ~~the~~ 1.8.12

~~Returns Resubmits new claims amended as required by the above.~~

As the amended claims called for in Gen File No. 270 of 1910, and referred to in the above, have been received, the correspondence in this file, may be filed

Vide D. 3502 of 12

Subd 3.2.13

File 4.2.13.

(Contd)

NOTE—Contn. sheet.

GPB—50,000—12-8-10

R. S. 12]

General and Revenue Secretariat.

gm File No. 271 of 1910

Da-31

Serial No.	
10	From Messrs Remfry and Son. d 27. 2. 13 Forwards Rs 50/- (Rs 30 pr filing the specifn and Rs 20/- as fee pr extension of time bpfp 3 months), and also 4 copies of the specifn and requests the filing of the specifn. The authority to file the specification having been granted on the 3rd August 1912, the present applin pr filing the specifn has been received within the limit of 3 months after the due date, for which a fee of Rs 20/- ~~xxxxxxxxx~~ prescribed under cl 3 of the IV Schedule of the Inventions Regs, has been remitted. The usual drafts are therefore put up. The subd Certificates at foot of the g.o. require signature. gm 14/3/13 BR Appd. Issue hm 12.3.12
11	To. The Compiler, g. 5660 d 20-3-13. Notifies the filing of the specification referred to.
12	To. Messrs Remfry & Son Calcutta. g. 5661 d 20-3-13. Forwards copy of the above & returns sl 8 with the certificate at foot duly filled in & signed.
13	To The D.C Dry Dept Bangalore g. 5662 d 20-3-13. Forwards Rs 50/- received with sl 10 & requests ackt
14	To. The State Ecologist, Supdt Museum & the Chief Engineer. ~~Xx~~ g. 5663-5 d 20-3-13. Forwards for record in their Office a copy of the specification & requests ackt.

NOTE—Contn. sheet.

[GPB—65,000—17-6-12.

G. R. S. 12]

General and Revenue Secretariat.

Gen File No. 271 of 1910

5186
5230
5236
5521

Serial No.	
15	From the D.C. Dry, Bangalore. No. 78/209 & 24. 3. 13. Acknowledge the receipt of the amount forwarded with Sl 13.
16	From the State Geologist. No. 2330 & 25. 3. 13.
17	" Supdt, Govt Museum. No. 249 & 21/24. 3. 13 Acknowledge the receipt of the specimens forwarded with Sl 14. The Chief Engineer's acknowledgment may be awaited Subd 27. 3. 13 31. 3. 13.
18	From the Chief Engineer. No. 2720 & 4. 4. 13. Acknowledges the receipt of the specimens forwarded with Sl 14. The correspondence may now be filed. Subd 13. 4. 13 16/4

NOTE—Contn. sheet.

GPB—65,000—17-6-12.

Application.

To THE SECY: TO THE GOVT: OF MYSORE,
~~THE PATENT SECRETARY,~~
Genl. & Rev. Depts.
~~PATENT OFFICE,~~
Bangalore, Mysore.
~~CALCUTTA.~~

FROM

REMFRY & SON,

SOLICITORS AND PATENT AGENTS,

CALCUTTA.

Case A.

Dated CALCUTTA, the 24th April 11.

Sir,

We beg to forward herewith an application ~~(with Duplicate thereof)~~ of CHARLES WASHINGTON MERRILL, of Berkeley, Alameda County, California, United States of America, Metallurgical Engineer,

for leave to file a Specification under Part I of the Mysore Inventions and Designs ~~Act, 1888~~ Regulation 1894, in respect of an Invention for "AN IMPROVEMENT IN PROCESSES FOR TREATING A SEMI-SOLID MATERIAL IN THE CONTAINERS OF FILTER PRESSES AND FOR REMOVING THE SAME THEREFROM"

and solicit the favour of your submitting the same for the orders of His ~~Excellency the Governor General in Council~~ Highness the Dewan of Mysore.

The prescribed Fee of Rs. 10/- is ~~enclosed~~ sent by P.O.O., and the Power-of-Attorney under which we are acting is sent herewith and we solicit the favour of your having same stamped Rs1/-.

There is no corresponding Indian Application.

We have the honour to be,

Sir,

Your very obedient servants,

REMFRY & SON.

per

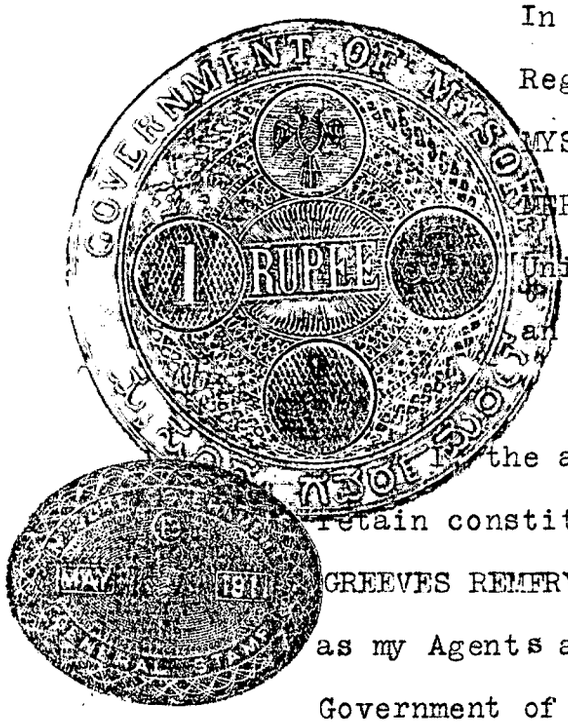
500—12-8-10.

GOVERNMENT OF INDIA ONE RUPEE 1R SPECIAL ADHESIVE

Case

Received Stamped with Ltr 21.10.6

POWER OF ATTORNEY.



In the matter of the Inventions and Designs Regulation, 1894, of the Government of MYSORE and in the matter of CHARLES WASHINGTON MERRILL, of Berkeley, Alameda County, California, United States of America, Metallurgical Engineer, an inventor.

I the abovenamed CHARLES WASHINGTON MERRILL, do hereby ~~retain~~ constitute and appoint RUPERT REMFRY, & HAMILTON GREEVES REMFRY, both of Calcutta, British India, - - - as my Agents and Attorneys to apply for and obtain from the Government of MYSORE and keep in force an Exclusive Privilege or Letters Patent for an improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom, and I authorise them to sign my name to such papers and writings and do such acts regarding the same, including the appointment of a substitute or substitutes, as may be necessary or expedient.

Dated this 21st day of March 1911

Signed, Sealed and Delivered at New York City

In the presence of Charles Washington Merrill

Witness
John Trench
59 Wall St
New York City
Atty at Law

Witness
Miland Parker Butler
59 Wall Street
New York City
Atty at Law

SOLICITORS & PATENT AGENTS REMFRY & SON. CALCUTTA

Cancelled - A

List No. 54

Regn. no 7 of 1910-11

APPLICATION

To

THE DEWAN OF MYSORE

The Application of CHARLES WASHINGTON MERRILL, of Berkeley, Alameda County, California, United States of America, Metallurgical Engineer, for leave to file a Specification under Part 1 of The Inventions and Designs Regulation, 1894 .

1. The applicant is in possession of an invention for an improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom,
he is the inventor thereof; and to the best of his information and belief the invention is new within the meaning of Part 1 of the Inventions and Designs Regulation, 1894; and no circumstance exists which, if the applicant be authorized to file a Specification and files it in accordance with that Part will disentitle him to an exclusive Privilege thereunder in respect of the invention.

The Applicant has applied for a Patent in the United Kingdom in respect of this Invention, No. 2803 dated the 3rd February 1911 See Illustrated Official Journal (Patents) No. 1151 , Page 154

2. The following is a description of the invention:-

SOLICITORS & PATENT AGENTS REMFRY & SON. CALCUTTA.

My invention relates to an improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom, and the primary object of my improvement is to facilitate and cheapen the removal from the containers of the material which will not pass through the filtering medium, and to improvements in that class of pressure filters which are provided with a sluicing pipe or nozzle communicating preferably with each container or frame for the passage of fluid under pressure thereto to reduce the cake deposited therein to pulp, and cause the same to flow out through outlets from one or more of such containers or groups of containers to the outside of the press, said sluicing pipe ~~pipe~~ having preferably a rotary movement imparted thereto for directing the sluicing fluid to all parts of the interior of the container and facilitate the reduction of said deposited cake to the required state of pulp. Processes of removing solid or semi-solid materials from containers of pressure filters have already been employed which consisted in providing an inlet for each distance frame or container of the filter press through which liquid, vapor or gas could be introduced under pressure and the solid, semi-solid or unfilterable contents sluiced or forced out through an exit in said frame, which exit might either be an independent outlet or might be the opening through which the material to be filtered was originally introduced.

The present invention is an improvement on the aforesaid process, and combines as a part thereof the treatment of the semi-solid material in the containers with

any desired liquid, vapor or gas for any desired purpose, and the removal of the solid or semi-solid material in addition to the agency employed in said process as hitherto practised by causing the same to be charged upon the cloths of the filter plates within the containers in thin layers, and afterwards as an element in the process subjecting them to the treatment outlined above and subsequently subjecting the layers of solid or semi-solid material to the pressure of liquid, vapor or gas acting from behind the filter cloths. For the purpose of best explaining how the present process is conducted, I would refer to accompanying four sheets of drawings, certain of which are of a diagrammatic nature which show types of the apparatus by which my present process may be carried out.

In the drawings, Fig. 1 is a longitudinal cross-section of a container; Fig. 2 is a vertical longitudinal section on the line 2 2 of Fig. 1 of a series of containers and filter plates put together in the manner used in filter presses; Fig. 3 is a vertical longitudinal section of a modified form of container; Fig. 4 is a vertical longitudinal section of a series of such modified form of containers with filter plates put together on the line 4 4 of Fig. 3; Fig. 5 is a vertical cross-section of a container of a still further modified form; Fig. 6 is a vertical longitudinal section on the line 6 6 of Fig. 5 of a series of such modified form of containers with filter plates put together; Fig. 7 is a longitudinal cross-section of a container with the supply pipe or channel W^1 W^2 W^3 omitted and the gate at the bottom of the container elongated so as to increase the clearance space from the interior of the

container; Fig. 8 is a vertical longitudinal section on the line 8 8 of Fig. 7 of a series of such modified form of containers with filter plates shown in Fig. 7 put together.

Fig. 9 is a front elevation of one of the improved forms of containers employed, and

Fig. 10 an end elevation thereof.

Fig. 11 a front elevation of one of the filter plates, and

Fig. 12 a sectional elevation thereof on the line 12 12 of Fig. 11.

Fig. 13 is a front elevation of a corner of one of the filter plates showing the means employed for facilitating the location of a leakage which may occur in any portion of the press.

Fig. 14 is a front elevation , and Fig. 15 an end view of the clamps for securing the filter cloth round the edge of the discharge channel of the filter plate.

Fig. 16 is an end elevation and Fig. 17 a longitudinal elevation showing the method of supporting the sluicing pipe, when placed within the press.

Fig. 18 is a side elevation showing types of devices employed for closing the opening end of the press, and

Fig. 19 is a plan view of the apparatus shown in Fig. 18 omitting the rear sluicing water inlet and mechanism connected therewith.

Fig. 20 is a front elevation and Fig 21 an end elevation showing the present improvements applied to a filter plate provided with an open instead of a closed discharge.

Fig. 22 is a front elevation and Fig. 23 an end

elevation of a filter plate the bottom of which slopes from one side down to the opposite side.

In the construction shown in Figs. 1 and 2, C' is the frame of the container, which may be in cross-section of any convenient shape. O' is an opening or outlet at one side through which the solid, semi-solid, or unfilterable material, hereinafter for convenience called the slimes, is removed from the containers, and which when a series of containers are put together in a filter press makes a continuous opening through the press, which is closed at the ends in any convenient manner and discharges into any suitable receptacle. A' is a corresponding inlet for treating the precipitate in place with liquids, vapors, or gases and which is preferably placed at either or both upper corners of the container. This opening may in certain cases be placed at one or both of the lower corners of the apparatus corresponding to 6 6 in Fig. 11. These openings form continuous channels when the containers and plates are placed together in the filter press. I' is an inlet through which the material to be filtered may be introduced, which inlet is of the same general character and becomes continuous when the containers are put together in the filter press and is provided preferably with the openings 1, 2 and 3, from which the material may be introduced into the chamber. W' is a supply pipe or channel through which the liquid, vapor or gas is introduced under pressure for the purpose of removing the unfilterable material. This is provided with a nozzle, slit, or hole N' which enters into each container. F' is the filter plate, which is introduced between the containers.

In the second construction shown in Figs. 3 and 4, the opening O^2, which corresponds to O' in the structure shown in Figs. 1 and 2, is placed within the container and contains in its interior the supply pipe W^2 , fixed or rotative, which corresponds to the pipe W' and like it is provided with nozzles N^2 N^2 similar to the nozzles N' N' which pass into each container, a series of these being employed , as in the previous construction. I^2 represents the inlet through which the material to be filtered is introduced, which corresponds to the inlet I' in Figs. 1 and 2.

In the third construction shown in Figs. 5 and 6, the discharge is effected through a series of openings O^3, which are closed by gates G, and the supply pipe W^3, which is fixed or rotative, is provided with a similar series of nozzles N^3, so that when the gates G are opened cleansing material may be introduced through the pipe W^3.

In the fourth construction shown in Figs. 7 and 8, the discharge is effected by the open bottom O^4 which is closed by the gate G'. The rotative pipe W',W^2, W^3, is eliminated, and when the gate is opened the contents of the container fall out into a suitable collecting receptacle, as soon as the pressure is exerted behind the cloths.

In each of the constructions, openings A',A^2,A^3 and A^4 respectively are shown, which are employed during the operation of charging the press as outlets for the clarified liquid, vapors or gases. After the press has been charged, however, these may be employed as inlets as hereinbefore stated.

The material to be filtered or treated is supplied

to the containers through the inlet I' or O or both and thereupon the solid, semi-solid or unfilterable material, hereinafter for convenience called the slime, will deposit upon the filter cloths as shown by the lines in the container on the extreme right of Fig. 2, so that it will form a layer on the cloths of the filter plates and cover the same and a space will be left in the container between the two layers. If now it is desired to subject the slime to any metallurgical treatment, the vapor, gas or liquid employed for such purpose may be introduced either through channels I' I^2 I^3 and I^4 or O' O^2 O^3 and O^4 or through the nozzle N' N^2 and N^3, or through the ports 5 5 as shown in Fig. 11 to each filter plate. After this has been done, in cases where it is deemed advisable to do so a vapor, liquid or gas under pressure is introduced through either the ports a' a^2 a^3 a^4 to alternate plates from the channels A' A^2 A^3 A^4 or through the ports 5 5 as shown in Fig. 11 to each filter plate and behind the filter plates, the action of which is to cause the layers of slime to fall off the cloths and drop to the bottom of the containers, thereupon the gates G are opened, if the container be of the type shown in Figs. 7 and 8, and the slimes will be discharged into a suitable receptacle: or, if the slimes are of such a character that they are not easily discharged from the container by their own weight, they can be washed out of the container by means of vapor, gas or liquid being introduced into it under pressure through the nozzle pipe or hole N' N^2 N^3 as shown in Figs. 1,2,3,4, and 5 and 6.

If desired, a plurality of inlets may be employed for

the introduction either of the mixture, the washing out medium or the medium employed for metallurgical treatment and the container may be either of the type of those above described or may be of any other suitable type but said containers as well as the filter plates are preferably provided with the further improvements which for convenience are illustrated separately in the arrangement I will now proceed to describe.

General Characteristics of the improved form of press in which the hereinbefore described improved process is carried out are best shown in Figs. 18 and 19 of the drawings. In the views, s represents the rear stationary end of the press; 10 the side bars of the press; 15 are screws each carrying a distance piece 15a which forces the movable end or follower head t forward in the side bars by means of the wheels 15b, and the pressure cylinder closing device 14, or any other convenient mechanism; 1 1 are the exterior frames of a series of containers, 3 3 are the filter plates, which are carried on the side bars 10 between the front stationary end of the press and the follower head t. All of these devices and parts are common to the ordinary form of filter press. These elements when set up compose the filter press substantially as shown in Figs. 18 and 19. For convenience the different parts of the apparatus will be described separately.

The Containers: The type of container preferably employed in the various constructions shown is seen in Fig. 9. 1 1 is the exterior frame of the container. The containers fit into the frame of the press between the filter plates as shown in Figs. 18 and 19. d is the

horizontal feed channel located in the centre at the top of the container through which the mixture of filterable and unfilterable component is introduced into the press. 6 6 are the drainage channels on either side, either or both of which channels may as hereinbefore described be used for the introduction of liquids, vapors or gases to the space behind the filter cloths if desired.

Referring to Fig. 9 it will be seen that the bottom 2 of the container or frame 1 is caused to slope downwards from its opposite sides inward toward the centre, with the object of facilitating the discharge of the pulp resultant from the sluicing action upon the solid contents of the container of the fluid issued from the pipe 19 which is shown in Fig. 18 as rotable and located within the press.

The filter plates: The filter plates are preferably of the type of construction as shown in Figs. 11 to 15 inclusive, which show the form of the filter plate adapted to be used in connection with the form of containers hereinbefore described. Each filter plate is provided with an opening d through which the material to be filtered is introduced, which opening is of the same general character as that in the containers and becomes a continuous channel when the various parts are put together in the filter press. Each filter plate is provided with one or more openings 6 as shown in Figs. 11 and 13 through which the filtered liquid is drained off from behind the filter cloths of each filter plate, during the charging and subsequent treatment of the slime and which are used as inlets for the admission of fluids behind the cloths when necessary to facilitate the removal of the slime to the

exterior. These openings when the filter plates and containers are put together in the press form a continuous drainage channel through the press, which is closed at the ends in any convenient manner. The surfaces of the filter plates of all the types employed are provided with any convenient arrangement of grooves or corrugations, preferably such that the corrugations permit of no continuous line of weakness of any considerable length, and at the same time effect complete and continuous drainage.

As shown in Fig. 11, the bottom 4 of each of the filter plates 3 over which the filter cloths are stretched and which alternate with the containers throughout the press, slopes similarly from each side to the centre, and an outlet 5 for the filtered liquid is provided from or near the lowest point of each, to each drainage channel 6, instead of an outlet being provided for each alternate plate direct to opposite drainage channels, thus effecting a quicker and more efficient deposition of the solid matter on the filtering medium and insuring more complete drainage of the filtrate from the plate.

In Figs. 20 to 23 inclusive, I show plates provided with an open instead of a closed discharge by means of one or more discharge cocks fitted at or near the lowest point of the plate. In such a construction it is advisable to provide an independent inlet treatment channel a located at any convenient point for the purpose of introducing liquid, vapor or gas behind the cloths either for treatment of the cakes or to facilitate the removal of the same as hereinbefore described.

In Figs. 20 and 21 the type shown is provided with a bottom sloping downward from the opposite sides inward toward the outlet and with two cocks 26 of any desirable

pattern by which the discharge of filtrate from the plate is effectuated and controlled.

In Figs. 22 and 23 the type shown is provided with a bottom sloping from one side downward to the other and provided with a single cock 26. In this type the outlet channel o for the pulp is shown separate from the sluiding pipe channel 28 which carries the sluicing pipe 19.

Instead of introducing the sluicing liquid into one end only of the sluicing pipe, which passes through the press from end to end as hitherto, in the present case I introduce the same simultaneously to both ends thereof. This insures a more uniform pressure of the liquid issuing from each opening in the sluicing pipe 19 and consequently a uniform sluicing action in each container; and by enabling a smaller pipe to be used, effects a corresponding diminution in the waste area within the press. In other words, it permits the use of a longer press with less sacrifice of space within it.

In order to enable the position of any leakage which may occur through the filtering medium at any point in the press to be readily and accurately located, I employ preferably the devices illustrated in Fig. 13, from which it will be seen, that the outlet 5 from the bottom of each filter plate 4, is connected to the drainage channel 6, by an exterior conduit 7. At a suitable position 8 in the length of the conduit 7, a guage or observation glass is introduced through which the condition of the effluent liquid or filtrate will be at once apparent. If desired said observation glass may be replaced by a small tap, by opening which the condition of the issuing liquid from any

given plate, will at once indicate the particular plate responsible for a leakage which is occurring and the position thereof be consequently at once located.

In order to afford ready access to any particular plate requiring attention as above indicated, each container 1 may be provided with a central lug 9,9a, at top and bottom as shown in Fig. 9 and by attaching a cable, chain or other equivalent thereto, the whole series of containers 1 and plates 3 beyond any defective point, may be run back on the side channels or girders 10, on which they are supported, thus enabling the necessary repairs to be effected with facility and rapidity.

The top of each side channel or girder 10 is provided with two semi-circular rails 11, with which grooved rollers 12 and 13 carried respectively by the containers 1 and the filter plates 3 engage , thereby preventing any side movement of said containers and plates and insuring perfect lining up when the press is assembled. Such grooved rollers 12 and 13,as will be seen from Figs. 9 and 10, occupy a staggered position on such containers and plates respectively and by thus permitting same to overlap, enable larger rollers to be employed, thereby minimizing the friction, and facilitating the movement of the containers and plates in opening and closing the press.

For closing the end of the press when assembled I preferably , as shown in Figs. 18 and 19, employ a combined arrangement of a pressure cylinder closing mechanism 14 of any known form of construction and a screw closing mechanism 15, so that the faulty or defective operation of either mechanism will leave the other efficiently operative.

In order to secure the filter cloth around the edge of the channel 16 in the plate 3 for the discharge of the pulp therefrom, instead of as hitherto providing a boss on the container frame 1 to fit the joint surface 17 of such discharge channel, I employ a separate clamping plate 18 as shown in Figs. 11, 14 and 15. This plate is of the required form to be applied, one to each side of the filter plate 3 over the cloth and be bolted to said joint surface 17, such construction ensuring a tighter joint of the cloth round the discharge channel 16 and presenting a minimum obstruction to the free exit of the pulp thereto. The boss hitherto provided on the container to fit against the joint surface 17 of discharge channel 16 and secure the filter cloth round the edges thereof, has been made of split or divided form to allow the issue of the sluicing liquid into the container and of the movement of the nozzle of the sluicing pipe to direct such liquid uniformly to all parts thereof, and besides presenting an obstacle to the free exit of the pulp to said discharge channel, by the spring due to such split form, tended to impair the efficiency of the joint between the cloth and plate, both of which disadvantages are obviated by the present construction.

Furthermore, as it is frequently advantageous to facilitate the removal of the solid material from the containers by applying a fluid pressure from the plate surface to the inner face of the filtering cloth, or other filtering medium, one or more strips 24 of suitable form and material are employed which are laid over the outer face of the filtering medium at convenient positions, and

are attached to the plate by the bolts 25, or other convenient devices, passing through the cloths thus minimizing the tendency of the cloths to tear.

When the sluicing pipe 19 is placed within the press in order to support it, I provide, as shown in Figs. 16 and 17, at any suitable number of intermediate points in the length thereof throughout the press, supporting blocks 20, preferably of wood, which by means of screws 21 are adjustable from the outside through the bottom of the press. The pipe 19 is fitted with collars 22 to bear on said blocks, so that the wear incident to any rotary movement imparted to the pipe, will fall on the collars 22 and not on the pipe itself, and the latter consequently will not become weakened, and will be always efficiently supported to avoid the sagging which would otherwise occur and so affect the uniformity of the sluicing action in the different containers throughout the length of the pipe.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:-

1. The hereinbefore described method of treating in and removing solid or semi-solid material from, the containers of pressure filters consisting in depositing a sufficient amount of said material, in layers of sufficient thickness upon the filter cloths which form the closure of the containers, so that a space is left between the layers, then subjecting the layers to the pressure of a liquid, vapor or gas acting from behind the filter cloths whereby the same are caused to fall to the bottom of the container and then forcing said material out of the containers by the impingement of a stream of liquid, vapor or gas under pressure acting from below upwardly upon the contents of said containers.

2. Causing the movable stream of liquid,vapor or gas under pressure set forth in the preceding claim to impinge directly upon and below the upper surface of the contents of the containers without separating the units of same.

3. Introducing the stream of liquid, vapor or gas under pressure set forth in claim 1 at a point adjacent to the outlet of the filters.

4.Removing the material which has been deposited in the containers of pressure filters in the manner set forth in claim 1 through outlet gates in the bottom of the containers by the pressure of liquid,vapor or gas acting from behind the filter cloths.

5. Subjecting the layers deposited in filter presses in the manner set forth in claim 1 to any desired metallurgical treatment before sluicing same out of the containers by the pressure of a stream of liquid, vapor or gas.

6. Subjecting the material deposited in the containers of filters to continuous pressure during deposition and metallurgical treatment prior to discharging same through openings in the bottom of the containers as set forth in the preceding claim.

7. The hereinbefore described method of sluicing a filter press by introducing a separate stream of sluicing liquid into the sluicing pipe at each end simultaneously.

8. In a pressure filter composed of separate filter plates and containers,a filter plate provided with a bottom sloping downward having a port at or near the lowest point thereof,and means for communicating the same to the channel openings with which the filter plates are provided.

9. In a pressure filter composed of separate filter plates and containers, a filter plate provided with a bottom sloping downward from the opposite sides inward toward the

outlet thereof the same having a port at or near the lowest point thereof, and means for connecting the same to the channel openings with which the filter plates are provided.

10. The combination with the filter plates of a guage or observation glass in the connection between the discharge port from the bottom of each filter plate and the channel opening with which same communicates, substantially as and for the purpose specified.

11. The combination with the filter plates of a tap or cock in the connection between the discharge port from the bottom of each filter plate and the channel opening with which the same communicates, substantially as and for the purposes specified.

12. In a pressure filter composed of separate filter plates and containers and the bottom of the filter plates of which slopes downward, the employment of a sluicing pipe passing through the filter whereby the contents is sluiced out of the containers and of a discharge cock from each filter plate at or near the bottom thereof.

13. In a pressure filter as set forth in the preceding claim the employment of a rotatable sluicing pipe for removing the contents of the containers of such filter.

14. In a pressure filter as set forth in claim 12 causing the bottom of the filter plates to slope downward from either side toward the centre.

15. The combination with the top and bottom of each container of a pressure filter of a central lug arranged to engage a cable and enable any desired group of plates and containers to which the cable is attached, to be moved back at will, at one operation, on the side channel or girders on which said plates and containers are supported substantially as and for the purpose specified.

16. The combination with the top of each side channel or girder on which the plates and containers of pressure filters are supported, of two semi-circular rails or tracks and a grooved roller attached to each plate and container on each side, arranged to engage one of such rails or tracks, said rollers occupying a staggered position on said plates and containers respectively, so as to alternately engage one and the other of such rails or tracks, substantially as and for the purpose specified.

17. The combination with the follower head of pressure filters of pressure cylinder and screw closing mechanism for opening and closing the end of the press, substantially as specified.

18. The combination with the discharge channel passing through each filter plate of pressure filters of a plate shaped to fit over and around the discharge channel opening for securing the edge of the filter cloth around the same, substantially as and for the purpose specified.

19. The combination with the sluicing pipe of pressure filters of a supporting block arranged to be adjustable from the exterior of the press, substantially as and for the purpose specified.

20. The combination with the supporting block of the sluicing pipe set forth in the preceding claim of a suitable collar attached to said pipe and arranged to bear upon said block.

3. The applicant, therefore, applies for leave to file

a Specification of the invention pursuant to Part 1 of the Mysore Inventions and Designs Regulation, 1894.

Dated this 21st day of March 1911

Charles Washington Merrill

I, CHARLES WASHINGTON MERRILL, the applicant above named do declare that what is stated in this Application is true to my knowledge, except as to matters stated on information and belief, and as to those matters I believe them to be true.

Charles Washington Merrill

Fig. 1.

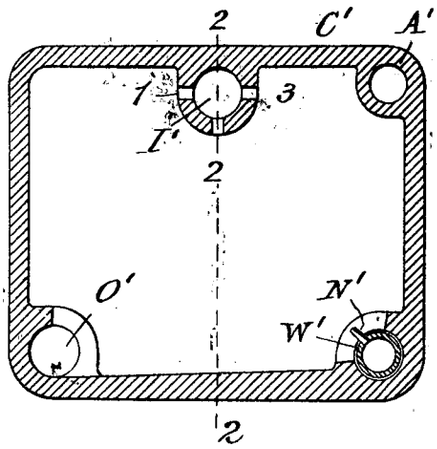


Fig. 2.

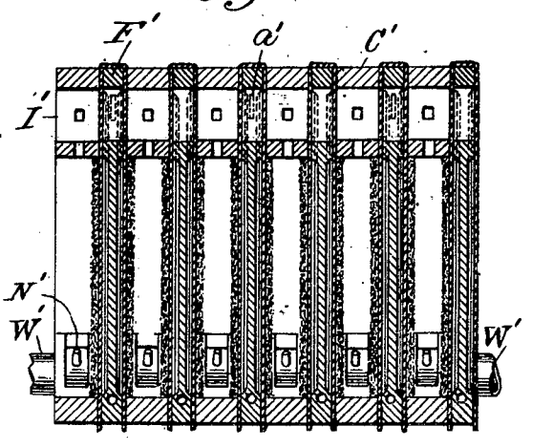


Fig. 3.

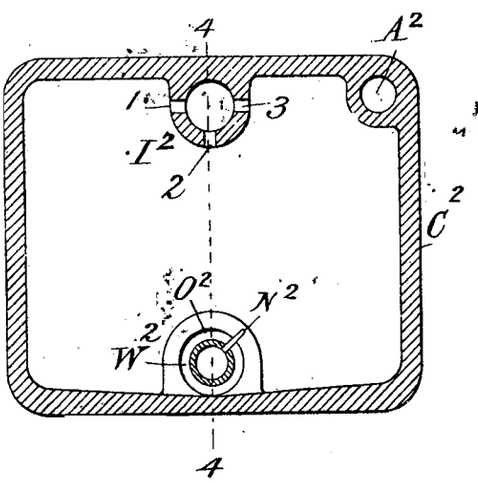


Fig. 4.

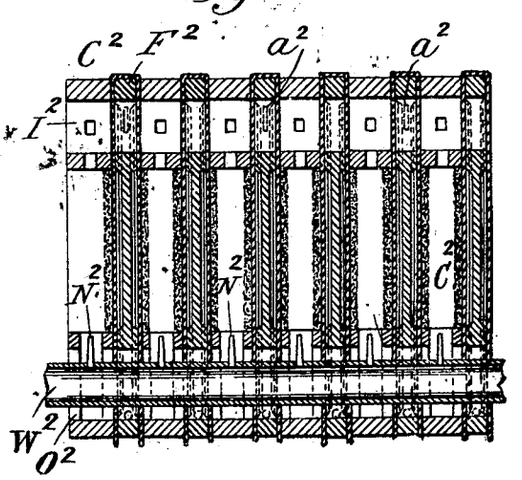


Fig. 5.

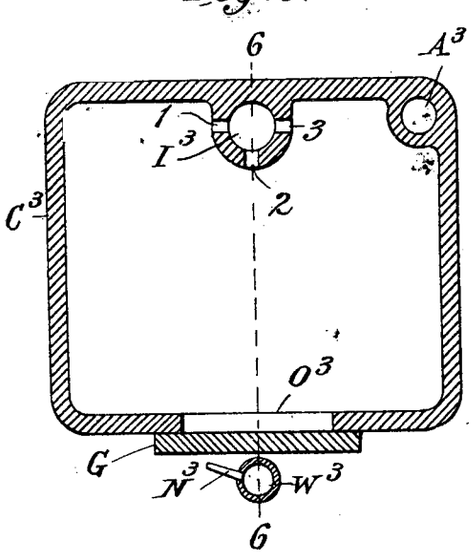


Fig. 6.

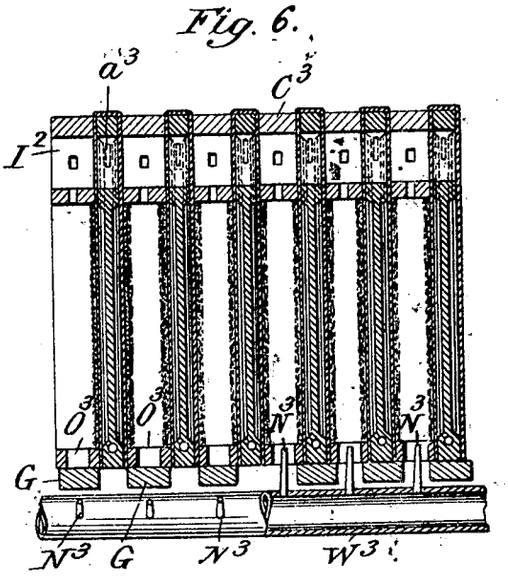


Fig. 7.

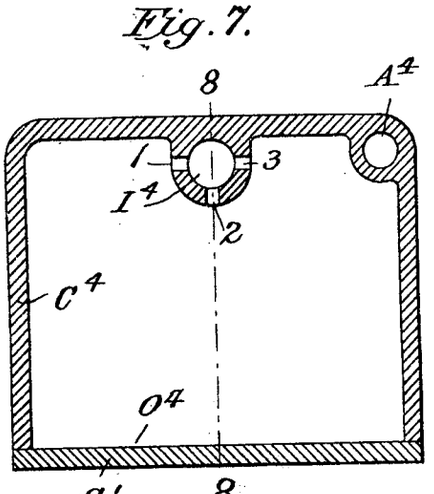


Fig. 8.

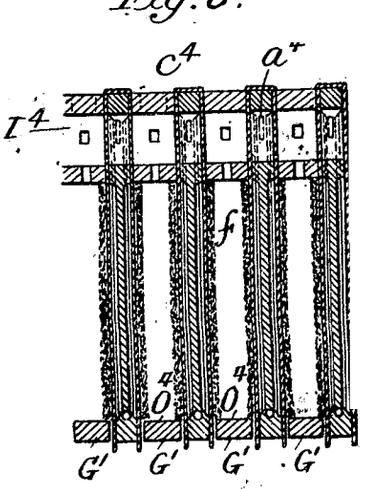


Fig. 9.

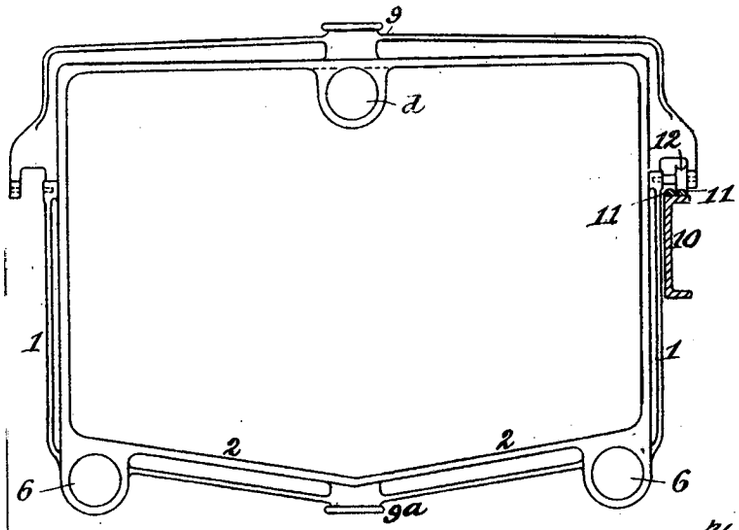


Fig. 10.

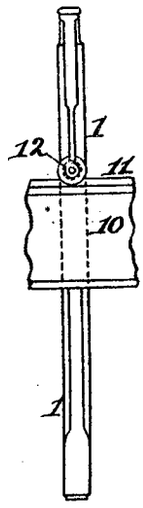


Fig. 12.

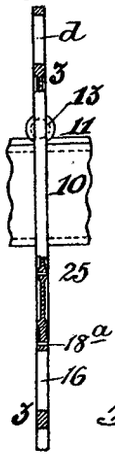


Fig. 15

Fig. 11.

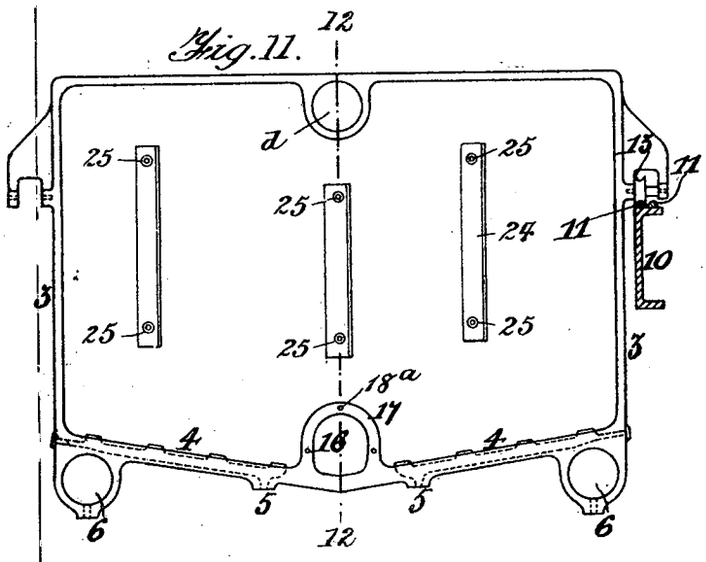


Fig. 14.

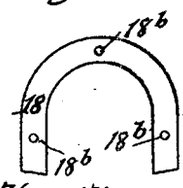


Fig. 17.

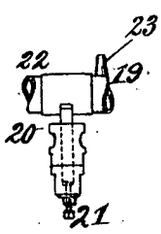


Fig. 13.

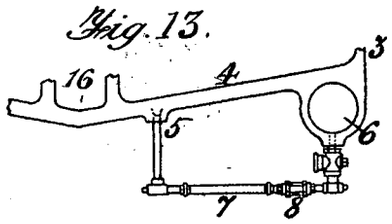


Fig. 16.

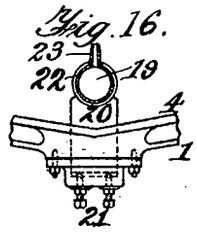


Fig. 18.

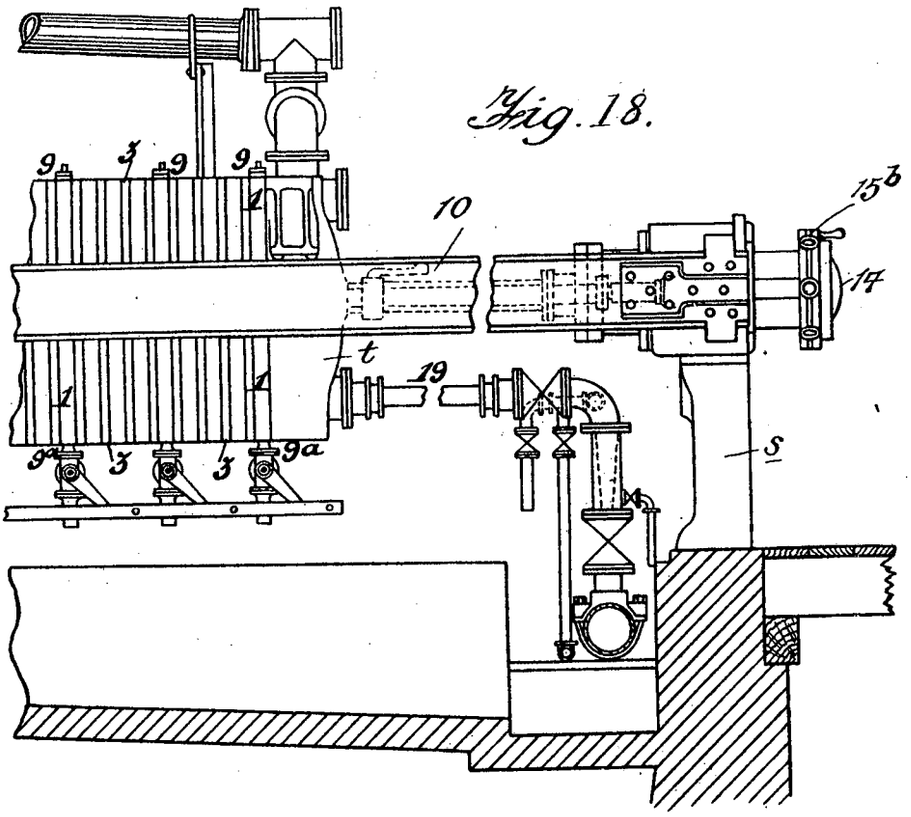

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Fig. 19.

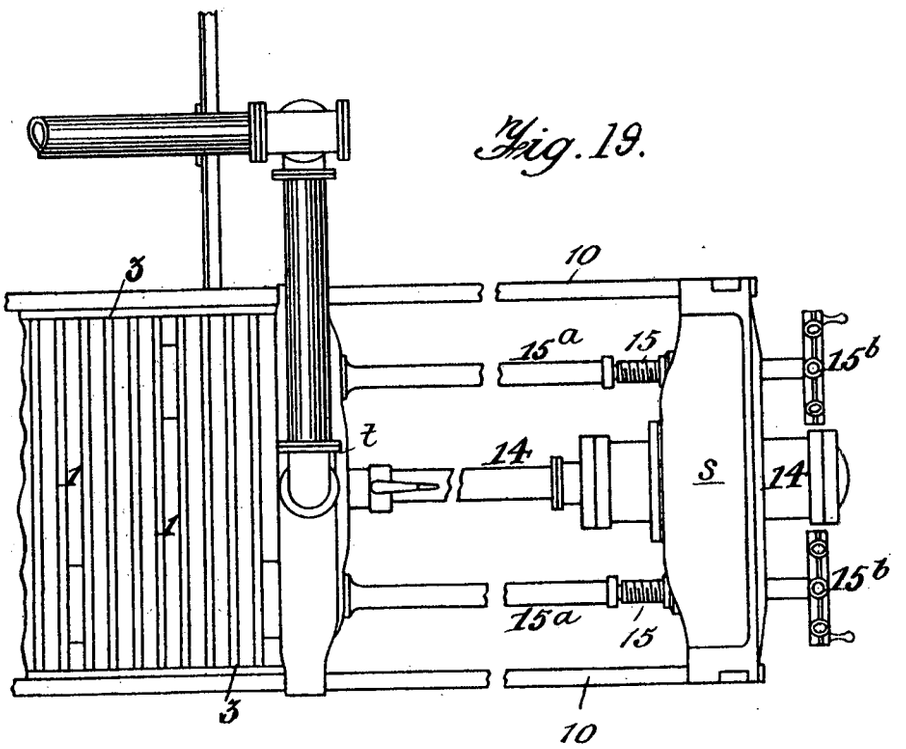
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Fig. 20.

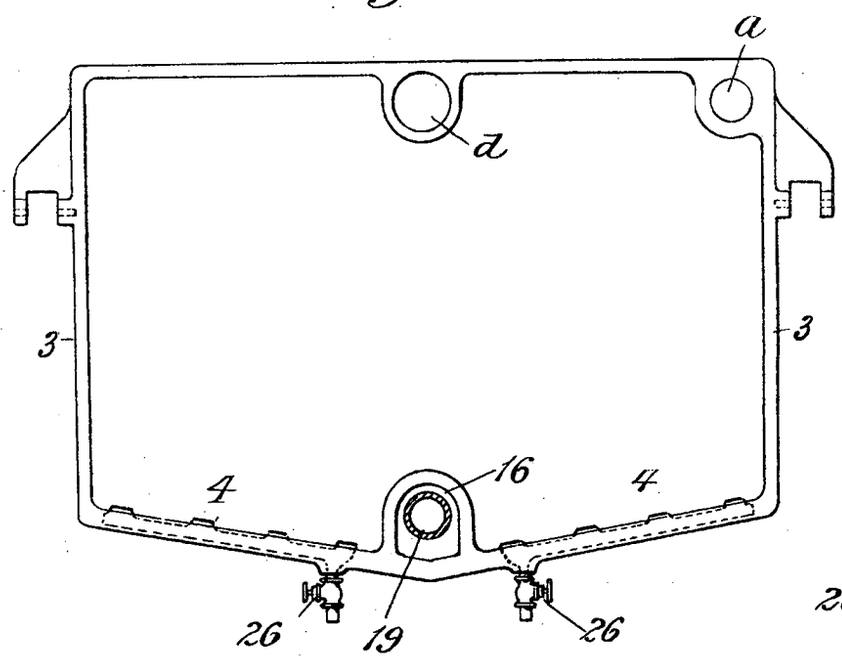


Fig. 21.

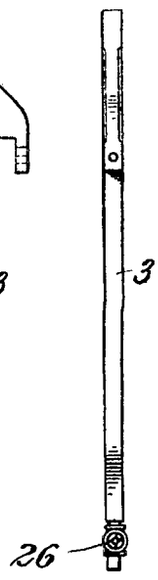


Fig. 22.

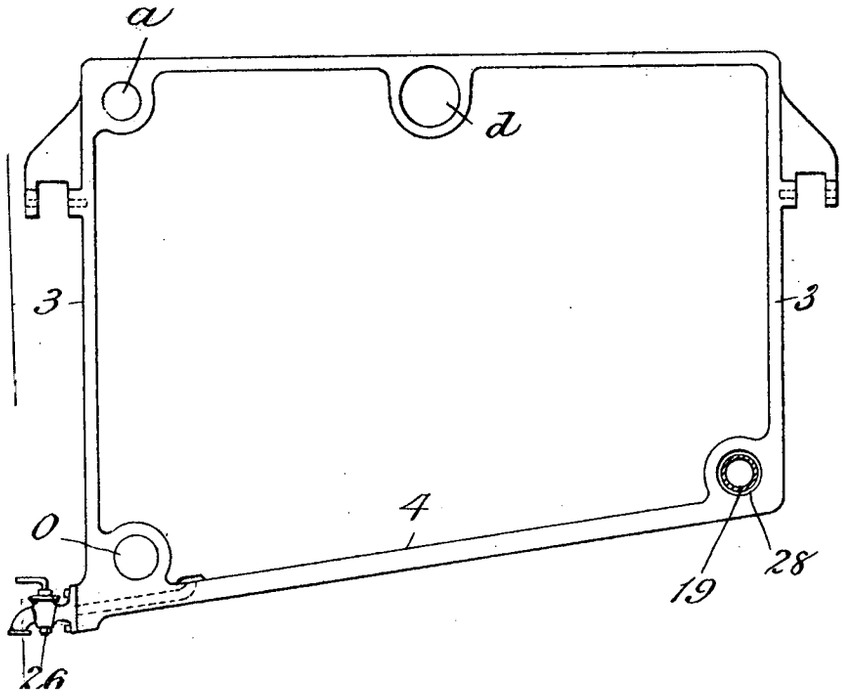
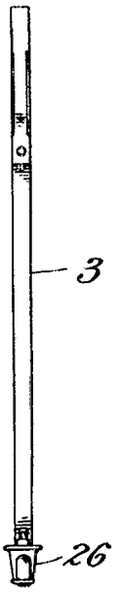


Fig. 23.



C. L. Merrill
(Physics) Jan A.

1. The method of treating in and removing solid or semi-solid material from the containers of pressure filters, consisting in depositing a sufficient amount of said material in layers of sufficient thickness upon the filter cloths which form the closure of the containers, so that a space is left between the layers, then subjecting the layers to the pressure of a liquid, vapor or gas acting from behind the filter cloths, whereby the same are caused to fall to the bottom of the container, and then forcing said material out of the containers by the impingement of a stream of liquid, vapor or gas under pressure acting from below upwardly upon the contents of said containers.

2. Introducing the stream of liquid, vapor or gas under pressure set forth in the preceding claim, at a point adjacent to the outlet of the filter, and preferably causing same to impinge directly upon and below the upper surface of the contents of the containers without separating the units of same.

3. Subjecting the layers deposited in filter presses in the manner set forth in claim 1 to any desired metallurgical treatment before sluicing same out of the containers.

4. Introducing a separate stream of sluicing liquid into the sluicing pipe of a filter press at each end simultaneously.

5.

5. In a pressure filter composed of separate filter plates and containers, forming same with bottoms sloping downward towards a port at or near the lowest point thereof.

6. Providing a gauge or observation glass or a cock in the connection between the discharge port from the bottom of each filter plate and the channel opening with which same communicates, substantially as and for the purpose specified.

7. The employment of a sluicing pipe, which is preferably rotatable, passing through the filter whereby the contents is sluiced out of the containers and of a discharge cock from each filter plate at or near the bottom thereof, said sluicing pipe being preferably formed with a collar supported upon a black adjustable from the exterior of the press, substantially as specified.

8. Providing the top and bottom of each container of a pressure filter with a central lug arranged to engage a cable and enable any desired group of plates and containers to which the cable is attached, to be moved back at will, at one operation, on the side channel or girders on which said plates and containers are supported substantially as and for the purpose specified.

9. Providing the top of each side channel or girder on which the plates and containers of pressure filters are supported, with two semi-circular rails or tracks and fitting each plate and container on each side with a grooved roller arranged to engage one of such rails or tracks, said rollers occupying a staggered position on said plates and containers

respectively,

respectively, so as to alternately engage one and the other of such rails or tracks, substantially as and for the purpose specified.

10. The employment of both a pressure cylinder and a screw closing mechanism for opening and closing the end of a pressure filter, substantially as specified.

11. The employment of a plate shaped to fit over and around the discharge channel opening of each filter plate for securing the edge of the filter cloth around the same, substantially as and for the purpose specified.

D

Inward Cover

12/5/11

4578
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G.R.S. 29A]

190

From

Secy. to the Govt. of His Highness the Maharaja of Mysore, Genl. and Rev. Dept.

To

The Dy. Com^r

Try. Deptt

Dated

Despatched 6.5.11 Bangalore

Received

General No. G 6457

Genl No. 271-10-2

Enclosure No. Rs 10/- only

Has the honor to forward herewith for credit a sum of Rs 10 received from Messrs Remfry & Sun, Calcutta, being the application fee in respect of an invention of Charles Washington Merrell of Berkeley for "An improvement in process for treating a semi solid material in the containers of filter presses & for removing the same therefrom" & to request the favour of an acct.

Rs 10.

1.5.11

Secretary

MGCFB—20,000—

VS.4

Dy Secy & Comm'r in Exc
D Cal 12/5/11

4575/11/5/11

G.R.S.' 29A] 385/190

From

Secy. to the Govt. of His Highness the Maharaja of Mysore, Genl. and Rev. Dept.

To

The Supdt of Stamps.

Dated

Despatched 6. 5. 11

Received

General No. C 6458

Genl No. 271-10-3

Enclosure No. 1 + Re one only

Has the honor to request that the accompanying Power of Attorney constituting Messrs Remfry & Sun, Calcutta, as agents for Mr Charles Washington Merrell of Berkeley in the matter of his invention for "An improvement in processes for treating a semi-solid material in the containers of filter presses &c" may be impressed with a general Stamp of the value of Re 1 & returned to this office A sum of Re 1 is herewith forwarded

Rs. As. P.
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11/5/11
for Chief Secy

MGCPT—20,000—15-5-09.

G.R.S. 29A]

190

From

Secy. to the Govt. of His Highness the Maharaja of Mysore, Genl. and Rev. Dept.

To

The State Geologist

Dated

Despatched 6. 5. 11

Received

General No. G 6459

Genl No. 271–10–4

Enclosure No. 1

Sir,

I am directed to forward herewith for enquiry & report & under Rule I of the Mysore Inventors & Designs Regln XI of 1894 an application from one Charles Washington Morrell of Berkeley for leave to file a specification of an invention for "An improvement in processes for treating a semi-solid material in the containers of filter presses & for removing the same therefrom."

Return Requested.

Thanks
1.5.11
Secretary

MGCPL—20,000—16-2-05

M.G.D. 13] MYSORE GEOLOGICAL DEPARTMENT.

Dated Bangalore, 6 - June 1911.

D 5138
e.

Gn. 271-10-5

No. 2436
Excls. Nos

From

E. W. WETHERELL, Esq., A.R.C.S., F.R.P.S.L., F.G.S.,
Offg. State Geologist in Mysore.

To

C.S. Balasundaram Iyer, Esquire, B.A.,
Offg. Secretary to the Government of His Highness
the Maharaja of Mysore, Genl.& Rev. Depts.

Sir,

In reply to your letter No. G.6459/G.M.271-10-4 dated 6th May 1911, I have the honour to forward herewith a copy of the report of the Offg. Chief Inspector of Mines in Mysore on the application of Mr. Charles Washington Merrill for leave to file a specification of an invention for "An improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom".

2. As regards the leave recommended to be granted, I beg to invite your attention to the Offg. Chief Inspector of Mines remarks on Mr. C. Washington Merrill's other application reported upon in my letter No. 2437, dated 6th June 1911.

3. The specification is herewith returned.

I have the honour to be,

Sir,

Your most obedient servant,

E W Wetherell

Offg. State Geologist in Mysore.

GPB—480—4-1-11

Case A.

Report on an application from Mr. Charles W. Merrell of Barkeley, Alameda County, California, for leave to file a specification of an invention for "An improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom". —

(1) The application fully describes and deals at length with the processes for which an improvement is claimed.

(2) There appear to be no previous applications in this respect infringing the rights of existing claimants. Leave may therefore be granted to file the above specification.

Signed / R. Bocquet
Offg. Chief Inspector of
Mines in Mysore.

Oorgaum,
12th May 1911.

Copy.

Ew Wetherell

Offg. State Geologist in Mysore.

31~~4~~. 5. 1911.

GENERAL.

Rcyd

To

THE ~~PATENT~~ SECRETARY, TO THE GOVERNMENT OF MYSORE,
~~PATENT OFFICE~~, GENL. & REV. DEPTS.
~~CALCUTTA~~. BANGALORE,
M Y S O R E.

FROM

REMFRY & SON,
SOLICITORS AND PATENT AGENTS,
CALCUTTA.

DIARY No. 5296

1911-1912
SECTION Genl. Sir mis
FILE No. 271 of 1910-11
ITEM No. 6

Dated CALCUTTA, the 5th June 1912.

re C.W.MERRILL. (MYSORE) CASE A.

With reference to the above Application in respect of an Invention for "AN IMPROVEMENT IN PROCESSES FOR TREATING A SEMISOLID MATERIAL IN THE CONTAINERS OF FILTER PRESSES AND FOR REMOVING THE SAME THEREFROM" submitted with our letter of 24th April 1911 and to your letter NO. G7337/G.M.270-10-9 dated 16th June 1911, we beg to forward herewith Amended Claims in order to comply with such letter and solicit the favour of early issue of the Order granting leave to file Specifications in this matter.

We have the honour to be,

Sir,

Your very obedient servants.

REMFRY & SON

1 Enclo

A.M.

1,000.—17-3-11.

G.R.S. 31]

No. G. 6573/G. R. 27-10-11.
(Genl. 4)

From

K. R. Srinivasiengar, Esquire, M.A.,

Offg Secretary to the Government of His Highness the Maharaja of Mysore, Genl. and Rev. Dept.

To

Dr. W. F. Smeeth, M.A., D.Sc., B.E., etc.,

State Geologist in Mysore.

Bangalore, the 14th June 1912.

Genl. and Rev. Secretariat.

Sir,

With reference to your letter No. 2437 dated the 6th June 1911, I am directed to forward herewith amended claims received in respect of the two inventions, described in the margin, of Mr. Charles Washington Merrill of Berkeley, and to request to be informed if the said claims may be accepted and leave to file a specification of each of the inventions granted.

(1) An "Improved process for precipitating and recovering valuable materials from solutions and particularly metals from hydro-metallurgical solutions".

(2) "An improvement in process for treating a semi solid material in the containers of filter presses and for removing the same therefrom".

2. The applications in respect of the said inventions are also forwarded for reference and obliging return together with the information called for above.

I have the honour to be
Sir
Your most obedient servant

sd- B. Ramaswamaiya.

For Offg. Secretary to Govt

GPB—5,000—3-5-06

K.R.
2

Office copy for file Sec. 271-10.

Extract from letter No. 233 dated the 23rd July 1912, from the State Geologist in Mysore to the Secretary to the Govt. of Mysore, Genl. & Revenue Departments.

In reply to your letter No. G.6573/Gen. 270-10-11 dated 14th June 1912, forwarding amended claim in respect of the two inventions of Mr. Charles Washington Merrill, I have the honor to state that in my opinion the amended claims may be accepted and the leave applied for granted in case of No. (2), viz., "An improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom".

× × × ×

DIARY No. 522 A.

1912-1913
SECTION Gen: Mis
FILE No. 271 of 1910-11
SERIAL No. 7

(sd) W. F. Smeeth,
State Geologist in Mysore.

2665

No. G. 658
G. D. 271-10-8

GOVERNMENT OF MYSORE

General Department.

Register No. 7 **of** 1910-11.

Bangalore, the 3rd August 1912.

WHEREAS an application, dated the 21st March 1911 and received on the 27th April 1911, has been submitted under Section 5 of the Mysore Inventions and Designs Regulation, 1894, by Mr. Charles Washington Merrill of Berkeley, Alameda County, California, United States of America, Metallurgical Engineer, (hereinafter referred to as "the applicant") for leave to file a specification of an invention for "An Improvement in process for treating a semi-solid material in the containers of filter presses and for removing the same therefrom",

And whereas the applicant has duly complied with all the requirements of Section 5 of the said Regulation;

The Government of Mysore are pleased, under Section 6 of the said Regulation, to authorize the applicant to file a specification of the said invention in accordance with the provisions of the said Regulation.

ORDERED, that the applicant be, and he is hereby, informed accordingly.

By Order of the Government of Mysore,

Dft) 30/7/12

for dft *Secretary to the Govt. of Mysore,*
Gen. and Rev. Depts.

VS

Certified that the fees prescribed in the fourth schedule to the Mysore Inventions and Designs Regulation, 1894, in respect of the application for leave to file the said specification and of the filing thereof have been paid by the applicant, and that the specification hereinbefore described has been duly filed in accordance with the provisions of Section 8 of the said Regulation on this the Twelfth day of March 1913.

Dft) 12/3/13

for dft *Secretary to the Govt. of Mysore,*
Gen. and Rev. Depts.

8

G.R.S. 26]

Diary No. of letter replied to

General and Revenue Secretariat
( )
, the 19 .

Date of issue 3-8-12

Signed by M.B. Ramalwamiya

2 Dfts
2 copies

Gen File No. 271-10
Serial No. 9

No. G. 659.

To

Messrs Rempry & Son,
Solicitors and Patent Agents,
Calcutta

Gentlemen,

With ref.ce to correc.ce ending with your letter dated the 5th June 1912, I am directed to forward herewith G.O. No. 1658 dd 3-8-12 Gen. 271-10-8 authorizing Mr. Charles Washington Merrill of Berkeley in California U.S.A., to file a specification of his invention for "An Improvement in process for treating a

over.

SUBJECT.

semi-solid material in the containers of filter presses and for removing the same therefrom," and to request that the same may be communicated to the party concerned.

2. As regards however, ~~the~~ his other invention, viz "An improved process for precipitating and recovering valuable materials from solutions and particularly metals from hydro-metallurgical solutions," I am to state that the amended claims will be accepted, provided the foll~~g~~ ~~alterations~~ amendments are made, viz.,

(1) At the end of claim 1, after the words "whole of the process" add the words "substantially as described."

(2) The beginning of claim 4 should be ~~read~~ as follows:-

"4. In the containers of the pressure filters used in the process set forth in claim 1, the employment of a pipe &c &c

(3) The beginning of claim 6 should be as follows:-

SC 12 (Paper numbered final) in the United Fire Files.

List of enclosures,

Copied by

Examined by

GPB—20,000—26-9-10

G.R.S. 27]

GENERAL AND REVENUE SECRETARIAT.

(*Continuation Sheet draft form.*)

. 6. In the pressure filters ref^d to in claim 4, the combination of a series of suitable filter plates &c &c."

3. The object of the amendments to claims 4 and 6, is to make it clear that these claims refer only to pressure filters which form part of the whole process in respect of which a Patent is desired and do not convey or imply any patent rights in respect of pressure filters in general which would be equivalent to including two separate patents under one Specification, viz., a patent for a process and a patent for improvements in pressure filters.

4. If the applicant wishes to secure patent rights in respect of the improvements ref^d to in claims 4 to 7 which shall be valid for all pressure filters whether used for the process referred to in his specification or not, it will be necessary for him to apply for a separate patent in which

GPB—10,000—22-2-11

the improvements are detailed and in which claims 4 to 7 may be included.

5. Whether this is done or not, Claims 4 to 7 amended as pointed out above should be included in the specification now returned herewith before the leave applied for for filing the specification can be granted.

Yours &c,

30.7.12

For the Secretary.

VS. 41

Copied KR 1/8/12

4761
C

GENERAL. W.Y. 8/2/13 W.A. 27/2/13

REGISTERED.

1912-1913
SECTION Gen : Mis
FILE No. 271 of 1910-11
Genl No. 10

To

THE ~~PATENT~~ SECRETARY, TO THE GOVERNMENT OF MYSORE,
~~PATENT OFFICE~~, GENL. & REV. DEPTS.,
~~CALCUTTA~~. BANGALORE,
MYSORE.

FROM

REMFRY & SON,
SOLICITORS AND PATENT AGENTS,
CALCUTTA.

Dated CALCUTTA, the 27th February 1913.

Sir,

Dept. P. File Ln. M.
FILE INDICATION.
Mysore Pats.

re C. W. MERRILL. MYSORE NO. 7 of 1910-11.

Case A.

Pursuant to the Order granting leave in this matter dated 3rd August 1912, Register No. 7 of 1910-11, we have the honour to forward herewith 4 copies of the Specification of CHARLES WASHINGTON MERRILL, of Berkeley, Alameda County, California, United States of America, Metallurgical Engineer, in respect of his Invention for "AN IMPROVED IN PROCESS FOR TREATING A SEMI-SOLID MATERIAL IN THE CONTAINERS OF FILTER PRESSES AND FOR REMOVING THE SAME THEREFROM".

The above mentioned Order is enclosed and we solicit the favour of your filling in the Certificate at foot thereof and having same signed.

A Post Office Order for Rs. 50/- is sent to-day being Rs. 30/- the Fee for filing the said Specifications & Rs. 20/- the prescribed Fee for extension of time (up to 3 months) for such filing the said Specifications not having been filed on or before 3rd February inst. owing to inadvertence.

We have the honour to name our Office in Calcutta as the Address for Service under the Act.

We have the honour to be,
Sir,
Your very obedient servants,

Enclo. Order.
Bk. Post. 4 Specns.
I.M.B.

REMFRY & SON

1,000.—17-3-11.

COUPON. *The remitter may write here any communication to the payee.*

Rs. 50 As. 0. re C.W.Merrill. Myso... *Remitter.*

3/3/13 No. 7 of 1910-11. As per letter of date

BEMFRY & SON

27/2

To B & V

WM

5/3/13

4 Pgs / 1 Pg WD : 2 copies

MYSORE GOVT. GEN. & REV. SECRETARIAT,

No. G. 5660 *Dated Bangalore,* 20th March 1903.

G.M.271-10-11

NOTIFICATION.

(PATENT.)

The following specification of an invention has been filed in accordance with Sections 8, 9, 10 and 11 of Regulation XI of 1894 (The Inventions and Designs Regulations) and is open to inspection at the Mysore Government Secretariat on application to the Secretary to the Government of His Highness the Maharaja of Mysore, General and Revenue Departments, and on payment of a fee of one Rupee.

By Mr Charles Washington Merrill, of Berkeley Alameda County, California, United States of America, Metallurgical Engineer

"An improvement in process for treating a semi-solid material in the containers of filter presses and for removing the same therefrom".

"

By Order,

12/3/03

for Secretary.

To

The Compiler *Mysore Gazette,* for publication.

GPB—500—23-7-06.

MYSORE GOVT. GEN. & REV. SECRETARIAT,

No. G. 5661 (C.2)
G.M. 27/-10-/2

Dated Bangalore, 20th March 1908.

From

The Secretary to the Government of H. H. the Maharaja of Mysore,
General and Revenue Departments.

To

Messrs Remfry & Son,
Solicitors and Patent Agents,
Calcutta.

~~Sir~~, Gentlemen,

With reference to your letter dated the 27th February 1913 I am directed to ~~state~~ intimate the grant of the extension of time applied for, and to forward copy of a Notification No. G 5660/Gen-27/-10-11 dated 20th March 1913, issued by this Government in regard to the invention filed by you under Regulation XI of 1894 (The Inventions and Designs Regulations.)

The order granting permission to file specification is herewith returned, with the certificate at foot, duly filled in and signed.

I have the honor to be,
Sir,
Your most obedient servant,

12-3-13
for Secretary.

14/3

13/3/13 4862

money draft sent 19/3/13

G.R.S. 29A]

19

From

Secy. to the Govt. of His Highness
The Maharaja of Mysore,
Genl. and Rev. Dept.

To

The Deputy Commissioner,
Treasury Department,

Dated Bangalore

Despatched 20th March 1913

Received

General No. G-5662

No. G.M-271-10-13

Enclosure No. with Rs 50/-

Has the honor to forward herewith the sum of Rs 50/- received from Messrs Remfry and Son, Calcutta, Rs 50/- being the fee payable under Schedule IV clauses (2) and (3) of the Mysore Inventions and Designs Regn. No. XI of 1894, in respect of the filing of a specification of the invention for "An improvement in process for treating a semi-solid material in the containers of filter presses and for removing the same therefrom" by Mr. Charles Washington Merrill, of Berkeley, Alameda County, California, U.S.A., and requests the favor of an acknowledgment for the receipt of the amount. By Order

G.P.B.—20,000—24-10-10.

12.3.

for Mg Sec

1613

G.R.S. 29A]

19

From

Secy. to the Govt. of His Highness
The Maharaja of Mysore,
Genl. and Rev. Dept.

To
(1) The State Geologist in Mysore.
(2) " Supdt, Govt. Museum.
(3) " Chief Engineer of Mysore.

Dated

Despatched 20-3-13

Received

General No. G. 5663-5
No. G.M. 271-10-14
Enclosure No. 1 each.

Has the honor to forward herewith for record in his office a copy of the specification of an invention for "An improvement in processes for treating a semi-solid material in the containers of filter presses and for removing the same therefrom" by Mr. Charles Washington Merrill of Berkeley, Alameda County, California, U. S. A., and request the favor of an acknowledgment.

By order,

12.3.13

For Secretary

G.P.B.—20,000—24-10-10.

DIARY No. 5188

Rs. 50-0-0 Book No. 1046

No. 789 1913

Bangalore the Treasury dated 24-3

Received from The Offg Secretary to the Govt of Mysore

Rupees Fifty only

Annas nil and Pies nil being on account of

Fee in respect of an invention

received with his docket No 05662

of 20.3.13 dm 27-12-13

In charge of Treasury.

Bangalore the 24th

Noted for Br V

25/3/13

V 26/3 Pt

W1/2693

M.G.D. 13]

MYSORE GEOLOGICAL DEPARTMENT,

DATED BANGALORE, 25 March 1913.

No. 2330

From

DR. W. F. SMEETH, M.A., D.SC., A.R.S.M., etc.,
State Geologist in Mysore.

REV No. 5230/5

1912-1913 To
SECTION Gen: Mis
FILE No. 271 of 1910-11
16

K.R. Srinivasiengar, Esquire, M.A.,
Offg. Secretary to the Government of His
Highness the Maharaja of Mysore,
General & Revenue Departments.

Sir,

I have the honour to acknowledge the receipt of a copy of the specification of an invention for "An improvement in process for treating a semi-solid material in the containers of filter presses and for removing the same therefrom" by Mr. Charles Washington Merril of Berkeley, Alameda County, California, United States of America, forwarded with your docket No. G.5663-5/G.M.271-10-14, dated 20th March 1913.

I have the honour to be,
Sir,
Your most obedient servant,

Registrar
State Geologist in Mysore.

GPB—400—21-6-13

C.N.

5236
C8

1912 - 1913
TION Gen : Mis
LE No. 274 of 1910-11
No. 17

No. 249

OFFICE OF ECONOMIC BOTANIST,
SUPERINTENDENT, MYSORE GOVERNMENT MUSEUM,
Bangalore, dated 21st *March* 1913.

FROM

G. H. KRUMBIEGEL, ESQ., F.R.H.S.,
Economic Botanist,
Superintendent, Mysore Govt. Museum,
Bangalore.

To

H. R. Srinivasa Iyengar Esq M.A.
Offg: Secretary to Government
General & Revenue departments

Sir,

I have the honor to acknowledge receipt of a copy of the specification of an invention for "An improvement in process for treating a denuded material in the containers of filter presses and for removing the same therefrom" by Mr. Charles Washington Merrill of Berkely, Alameda County, California, U.S.A. forwarded with your no. G. 5663-5 of the 20th instant. G.Sr. 271-12-14.

I have the honor to be
Sir,
Your most obedient Servant,
G. H. Krumbiegel
Superintendent
Govt. Museum

10.

V
26/3 [illegible] 26/3

1912-13

From

G. H. KRUMBIEGEL, Esq., F.R.H.S.,
Economic Botanist,
Supt., Mysore Govt. Museum,
Bangalore.

To

The Hon'ble Secretary to Govt.
Govt. of Revenue Department
Bangalore

Dated 27/7/1913

Despatched

Received

General No. 249

No.

Enclosure No.

Acknowledging receipt of a copy of the Specification forwarded with Govt. No. G. 5663-5 dated 27.12.14 of the Patents Act.

GPE—5,76,000—6-4-12

Mysore Public Works Department,

No 2720. Central Office,

Bangalore, Dated 4th April 1913.

From

The Chief Engineer of Mysore, D. 5521
9.

B a n g a l o r e.

To

The Secretary to the Government of His Highness the Maharaja of Mysore, General and Revenue Departments, B a n g a l o r e.

DIARY No. 5521 G

1912-1913
SECTION Gen : mis
FILE No. 271 of 1910-11
ITEM No. 18

Sir,

I have the honor to acknowledge, with thanks, the receipt of a copy of the specification of an invention for "an improvement in process for treating a semi solid material in the containers of filter presses and for removing the same therefrom" by Mr.Charles, Washington Merill of Berkley, Alameda Country, California, U.S.A., forwarded with your memo No.G.5663-5/G.M.271-10-14 dated the 20th March 1913.

I have the Honor to be,

S i r,

Your most obedient servant,

for Deputy Chief Engineer of Mysore.

ARA.